

Participants:

Duncan Kenyon (DK) – Baseline Emissions Management
Keith Driver (KD) – Baseline Emissions Management
Peter Amerongen (PA) – Habitat Studio
Alex Joseph (AJ) – EnerVision
Andy Smith (AS) - SolNorth
Tanya Maynes (TM) – C3
Karen Haugen-Kozyra (KHK) – C3

Highlighted text indicates changes to be made to protocol from November 25th Draft.

Minutes:

1. **Introductions**
2. **Review of the process**
3. **TM - Background :**
 - **Consensus is no sustained objection** – want to have something that we can all live with.
 - All comments and issues must be tracked. It will go to the regulator for final approval.
 - This is the first round of technical review – there will likely be some revisions – hopefully nothing too substantial.
 - Once we are happy for this it will move forward for a broader consultation. The next step for this protocol will be to streamline it and have a technical/market consultation. If things arise along the way, we will work on those things. The final steps are to go back to the regulator and post for public review.
4. Context of what we are doing here – review of the Alberta Offset System
 - Review of protocol development
 - Rules of offset system – including criteria
 - Review of Specified Gas Regulations and compliance options
 - Government wants to develop a set of standards following a quasi life cycle assessment and based on the ISO 14064-2 system in which all sinks, sources and reservoirs (SSRs) are identified.
 - The system is designed on the following principles:
 - i. We need to ensure environmental integrity;
 - ii. we need to be reasonable (not every molecule);
 - iii. we want to adapt precedence sent elsewhere (if there is an approach used elsewhere (i.e WRI/CDM – grid intensity factor (GIF) calculations based on build and marginal capacity of a system) – if it makes sense;
 - iv. Life Cycle Approach – it’s cumbersome but worthwhile – we are trying to streamline it.
 - Hope is that early in the new year we will have a Grid Intensity Factor that is necessary for this and other protocols.

5. Keith Driver – Walk through of the protocol – approach, logic and calculations
 - Scope and Description – where it is applicable, where it fits
 - Process Flow Diagrams – show which sources and sinks are applicable based on ISO 14064-2. Not all sources and sinks are relevant to all projects
 - **Baseline condition** is what is happening in the absence of the project. I.e. Community built according to the previous model vs. a project which is a community built to new standards. “5 Box approach” in Figure 2.1. Top to bottom is what is happening during the project. Going from Left to Right is looking at what is happening before and after the project. We look at this for both the baseline and project condition.
 - **Definitions:**
 - i. **Controlled** – onsite – project operator controlled
 - ii. **Related** – upstream – the more they use the more is used but not directly responsible
 - iii. **Affected** – Unexpected market consequences.
 - iv. **Materiality** – defined as greater than 5%
 - Equations – for all the sources and sinks included
6. Duncan – Details of the Project
 - Particularly want feedback on the standard that we are using – is it right?
 - We are looking at EnerGuide for Houses (EGH) 75 as a starting point. Do you feel that this is easily quantifiable? Is there another approach that is viable?
 - PA – probably as good as anything. If it looks like LEED H will replace all of this, than would need alternative. EGH is easy to get and apply to any building. Probably best to date.
 - LEED H will likely use the energy per area standard, but likely more than a year away.
 - PA - 15% less than EGH 75 is very arbitrary.
 - Difficult to baseline so assume once you have built to EGH 75, how do you say what an average house will be? Arbitrarily chose 15% less efficient than base house as a baseline.
 - PA - Baseline should be the minimum building code house.
 - **How does a minimum building code house rate on the EGH rating system?** Likely around 68.
 - Consensus that baseline would be 72. Based on the fact that 69-69 is too low. The average sized house would likely come in at 71 – based on expert opinion even though model energy code is 68-69. The majority of homes are typically above code in Alberta – Code is low in AB.
 - Question about what is in it for the home builder? Depends on the energy savings from an EGH 75 to and EGH XXX. Might be around \$500 per year?

Comment [tm1]: Karen - can you confirm that I got this right?

- PA – question on basing on square footage. Building an energy efficient house that is 10,000 ft² is the wrong message to be giving offsets for. Perhaps a different metric could be number of bedrooms. Number of people?
- PA – might be worth looking at R2000. (DK – will be looking into the penalty associated with building a house of a certain size.)
- With all the complex variables, recommend that you go with Energuide. The larger the house the more difficult it is to move up the scale. Might open a can of worms to go down this road.
- Example: EGH of 68 at about 12 T/y and retrofitted to 78 and reduced by 3T/y.
- Discussion of Grid Intensity Factor (GIF)
- **Does the flexibility mechanism (1) make sense?** PA – how do you demonstrate equivalency?
- **Are you able to get an energy per m² that you can transfer from EGH to another? Can we make a protocol that easily switches between rating systems?** You have to work around it for the moment but understanding is that NRCan is doing this.
- Including this kind of flexibility makes it difficult to validate protocols. It almost triggers another protocol need. KHK preference is to not allow too much flexibility. If there is a need to develop a different standard, than it will be developed. By making it overly flexibly, we might make it impossible to use.
- AJ – the moment you get above 85 it doesn't include plug loads, A/C and renewables. But as R2000 and we move towards near zero this won't work for that.
- PA – GH is working on looking at this- to be followed up with by Duncan. GH work is built out of a protocol that CMHC had.
- In a near term, this might be a challenge. As the market is demanding more and more accuracy, that problem might work it's way out of the system.
- DK - Table 2.3 – when we boil it down we get 7 items that will be reported and recorded. Do these items make sense?
- AJ - For P3, P4 and P5 – it does allow for generation on sight.
- Confirmation that EnerGuide can be broad enough to be the standard but we still have flexibility to use in AB.
- Page 18 – Formula's for calculations.
 - i. Baseline:EGH is set up with baseline and project file.
 - ii. This is perfect. Baseline is still the challenge. If the protocol pegs that and if it is movable it is the biggest challenge. **Static vs. the Dynamic baseline – is a question that will be posed to the Policy Maker.** Possibility that baseline (standards) might change over time. PA – baseline has to move for the process to have credibility. Need to ensure that we don't undermine the whole process. Baseline should have some basis in reality. **Is the group comfortable in**

- holding a baseline stable for 8 years?** Does EGH have a baseline established for a new home?
- iii. AJ - Typically not doing data collection to determine the average industry baseline. The amount of changes in the past three years have probably changed the EGH 3 points. Probably huge momentum to see significant changes in the near future. Perhaps baseline review every 2-3 years.
 - iv. KHK – preference to push to 5 years but we can say that it is assessed annually. We want to meet environmental integrity and that is practical to use but we don't want to scare people away. We need to give people a stable time horizon.
 - v. AJ - 5 years would be enough to get large track builders to think.
 - vi. DK - Is there any point in canvassing a number of large track builders? AJ - Yes, worth pursuing.
 - vii. KHK - They will be invited to the second round of technical/market review – request to have AJ submit names of perspective individuals.

Are there area's that we want to discuss some more?

AJ – this initially looked very cumbersome but it is a fantastic opportunity for the home building industry. This potentially results in equivalent new home incentives that exist in other provinces that don't exist in AB. Will this be the best program that a builder can latch on to? Are there risk / benefits that there might be multiple markets?

KHK – It is important to note that current thinking is that if you receive an incentive under a program, you likely won't generate offsets from that project. I.e. if you receive an incentive under Fed program, it won't cover the entire cost of the project. Therefore, some suggest that you should be able to deduct the Fed Incentive portion of your costs and still participate in an offset system on the balance. Also, credit for early action (back to 2002) will likely only be an AB system thing. With Feds, it will be a start date of 2006 with no credits being earned until 2008. The work we have done with Environment Canada has shown that the protocols that have been developed under the Alberta Offset system have been ranked very well. They are well positioned to be national protocols. Also, with markets developing in the West and East, the vehicles that link the markets are the protocols and standards. There is a lot of talk about linking marketplaces. Protocols are the language for linking them.

DK – we are using the EGH as the baseline to estimate what the energy consumption –is there still will be some data management requirements for developer of projects. Data management will be based on the activities of table 2.4. Will need to keep track of some items such as P4 – burning some fuels i.e. power used to power geothermal pump.

AJ – EnerGuide will project those numbers.

DK - Need to have more than just computer projections. It will need to be supported with documentation. **What is the feasibility of putting in data**

management into residential houses? Pretty hard to aggregate it backwards to get numbers that are going to motivate companies. What gets measured gets managed. SmartMeters in AB – not there yet.

PA – really important to simplify as much as possible to get builders involved. Looking through the spreadsheet, there were many items that don't always apply. It would be great to strip some items out of the spreadsheet that don't always apply.

DK – the spreadsheet is set up to include the numbers that are applicable to this protocol. This is where the rubber hits the road.

PA - Need to ensure that the language is consistent with Building vocabulary.

KHK – when it comes to the next round of consultation, the protocol is streamlined heavily. Once we are happy with the protocol, we streamline them and send them out ahead of time.

TM – **Does the protocol adequately cover retrofits of existing homes?**

PA – not likely to be used on a mass scale, but could happen. Baseline would be established during the pre-audit. Handles it great.

PA – transportation energy is there any way to build this in?

KHK – outside the scope of this protocol.... Perhaps a second protocol

AS – not set up to easily to account for envelope.

Want to look at wall type, window type and insulation.

No discussion of PM emissions – a big deal given coal based fuel source.

(**KHK** – we are working within the Specified Gas Emitters Regulations which only looks at GHGs.)

How is carbon stored in the 'framing of the house' accounted? Desire to have credits earned from the 'extra fibre' use in a super insulated house. (**KHK** – unfortunately it isn't counted in this protocol. **DK** – it is captured under a LEED standard.)

PA – envelope decisions will be accounted for in a HOT2000 and EnerGuide for Houses.

Next Steps

- These protocols are one of a kind.